

***LineUp With Math™* Alignment**
Minnesota Academic Standards
Mathematics

Strand I. MATHEMATICAL REASONING

Standard: Apply skills of mathematical representation, communication and reasoning throughout the remaining four content strands.

Benchmarks

1. Assess the reasonableness of a solution by comparing the solution to appropriate graphical or numerical estimates or by recognizing the feasibility of solutions in a given context and rejecting extraneous solutions.

***LineUp With Math™* Activities**

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

2. Appropriately use examples and counterexamples to make and test conjectures, justify solutions and explain results.

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

3. Translate a problem described verbally or by tables, diagrams or graphs, into suitable mathematical language, solve the problem mathematically and interpret the result in the original context.

--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

4. Support mathematical results by explaining why the steps in a solution are valid and why a particular solution method is appropriate.

--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Strand III. PATTERNS, FUNCTIONS AND ALGEBRA

Sub-Strand A. Patterns and Functions

Standard: Represent and analyze real-world and mathematical problems using numeric, graphic and symbolic methods for a variety of functions.

Benchmarks

4. Apply basic concepts of linear, quadratic and exponential expressions or equations in real-world problems such as loans, investments and the path of a projectile.

***LineUp With Math™* Activities**

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

--Predict and plot the relative motion of two or more airplanes on given paths.

Strand V. SPATIAL SENSE, GEOMETRY AND MEASUREMENT

Sub-Strand C. Measurement

Standard: Use the interconnectedness of geometry, algebra and measurement to explore real-world and mathematical problems.

Benchmarks

LineUp With Math™ Activities

--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.